

105

# MARINE CHEMIST'S CERTIFICATE

SBA Shipyard, Inc.

## SURVEY REQUESTED BY

JAR 5

VESSEL  
Tank barge

TYPE VESSEL  
SBA Yard

LOCATION

*Can Oil Co.*  
OWNER OR AGENT  
JW Indicator

TEST METHOD  
Lube oil

LAST CARGO

2/22/77

DATE  
10:30 AM

TIME OF COMPLETION  
5463

CERTIFICATE NO.

Inspection and air tests show the following:

Shifting of vessel within shipyard permitted Yes X No     

All cargo tanks (3) clean and gas free, safe for men and fire, AIR BLOWER IN WORK TANK.

Wing double bottom tanks 1 thru 4 P&S-gas free, clean except some grease coating, safe for men.

Forward and after rakes-clean and gas free, some ~~xxxxx~~ grease coating, wipe in way of work, have air ventilation, then safe for men and fire.

Cargo lines-open, drained.

Deepwell pump-open, drained.

Steam coils, air blown, gas free.

Work must be commenced within 24 hours of date and time of issuance, unless otherwise noted. In the event of any physical or atmospheric changes affecting the gas-free condition of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned.

### Qualifications

Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

### Standard Safety Designations

**SAFE FOR MEN.** Means that in the compartment or space so designated: (a) The oxygen content of the atmosphere is at least 18.0 percent by volume; and that, (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Marine Chemist, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**SAFE FOR FIRE.** Means that in the compartment so designated: (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (b) In the judgment of the Marine Chemist, the residues are not capable of producing a higher concentration than permitted by 1-5.2 (a) under existing atmospheric conditions in the presence of fire and while maintained as directed on the Marine Chemist's Certificate; and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or, in the case of fuel tanks, have been treated as deemed necessary by the Marine Chemist.

**SAFE FOR SHIPBREAKING.** Means that the compartment so designated: (a) Shall meet the requirements of 1-5.1; and, (b) In the judgment of the Marine Chemist, the residual combustible materials designated are not capable of producing fires beyond the extinguishing capabilities of the equipment on hand; and, (c) All adjacent compartments or spaces shall meet the requirements of 1-5.2 (c).

### Chemist's Endorsement

This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with the Standard For the Control of Gas Hazards on Vessels to Be Repaired, adopted by the National Fire Protection Association, and have found the condition of each to be in accordance with its assigned designation.

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed W. B. Hatway  
Marine Chemist Cert. No.

The undersigned shipyard representative acknowledges receipt of this Certificate and understands the conditions and limitations under which it was issued.

Shipyard Representative Title Date Time

28A 3rd Ave, Inc.

5518913

25 AL

**ALBERT**

Look inside

7050161 WL

OWNER OF PLANT

TEST METHOD

W228V 3221  
b76V A62

0294 274.6

## NOTES

## LAND MANAGEMENT

MA 03:01

DATE OF COMPLETION 8/24/83

## LAND MANAGEMENT

\_\_\_\_\_ ON X as? authorized signatory subject to guidelines: \_\_\_\_\_

ALL cargo tanks (3)-clean and gas free, safe for men and fire, AIR BLOWER

Wing double bottom tanks I turn 4 psi-gas free; clean except some grease coating safe for men.

Wide in way of work, have air ventilation, change of air, and fire. Forward and aft rakes-clean and has free, some minor grease coating.

Carlo Lindeborn, benierb

•leninib ,nəqə-çmı: Həvəzə

steering coil? down use tree?

Work must be commenced within 24 hours of date and time of issuance, unless otherwise noted.  
In the event of any physical or atmospheric changes affecting the gas-free condition of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned.

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to conditions, modifications and restrictions.

The undersigned hereby certifies that the above information is true and correct to the best of his knowledge and belief.

Signed \_\_\_\_\_  
Name of Officer or Agent

[illegible]

# MARINE CHEMIST'S CERTIFICATE

SBA Shipyard, Inc.

## SURVEY REQUESTED BY

JAR 5

VESSEL  
Tank barge

TYPE VESSEL  
SBA Yard

LOCATION

*Can Oil Co.*  
OWNER OR AGENT  
JW Indicator

TEST METHOD  
Lube oil

LAST CARGO

2/22/77

DATE  
10:30 AM

TIME OF COMPLETION  
5463

CERTIFICATE NO.

Inspection and air tests show the following:

Shifting of vessel within shipyard permitted Yes X No     

All cargo tanks (3) clean and gas free, safe for men and fire, AIR BLOWER IN WORK TANK.

Wing double bottom tanks 1 thru 4 P&S-gas free, clean except some grease coating, safe for men.

Forward and after rakes-clean and gas free, some ~~xxxxx~~ grease coating, wipe in way of work, have air ventilation, then safe for men and fire.

Cargo lines-open, drained.

Deepwell pump-open, drained.

Steam coils, air blown, gas free.

Work must be commenced within 24 hours of date and time of issuance, unless otherwise noted. In the event of any physical or atmospheric changes affecting the gas-free condition of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned.

### Qualifications

Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

### Standard Safety Designations

**SAFE FOR MEN.** Means that in the compartment or space so designated: (a) The oxygen content of the atmosphere is at least 18.0 percent by volume; and that, (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Marine Chemist, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**SAFE FOR FIRE.** Means that in the compartment so designated: (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (b) In the judgment of the Marine Chemist, the residues are not capable of producing a higher concentration than permitted by 1-5.2 (a) under existing atmospheric conditions in the presence of fire and while maintained as directed on the Marine Chemist's Certificate; and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or, in the case of fuel tanks, have been treated as deemed necessary by the Marine Chemist.

**SAFE FOR SHIPBREAKING.** Means that the compartment so designated: (a) Shall meet the requirements of 1-5.1; and, (b) In the judgment of the Marine Chemist, the residual combustible materials designated are not capable of producing fires beyond the extinguishing capabilities of the equipment on hand; and, (c) All adjacent compartments or spaces shall meet the requirements of 1-5.2 (c).

### Chemist's Endorsement

This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with the Standard For the Control of Gas Hazards on Vessels to Be Repaired, adopted by the National Fire Protection Association, and have found the condition of each to be in accordance with its assigned designation.

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed W. B. Hatway  
Marine Chemist Cert. No.

The undersigned shipyard representative acknowledges receipt of this Certificate and understands the conditions and limitations under which it was issued.

Shipyard Representative Title Date Time

201

CERTIFIED CHEMISTS IN U.S.A.  
W.B. HATAWAY, INC.  
1111 WASHINGTON, NO. 222

W.B. HATAWAY & COMPANY  
P.O. Box 3802  
Tel. 885-8400 — 886-4555 — 886-5573  
BEAUMONT, TEXAS 77704

MEMBERS  
MARINE CHEMISTS ASSOCIATION

# MARINE CHEMISTS' CERTIFICATE

28A Shipyard, Inc.

SURVEY REQUESTED BY

JAN 2

212217

OWNER OR AGENT  
JW Indicator

VESSEL  
Tank barge

DATE  
10:30 AM

TEST METHOD  
Lube oil

TYPE VESSEL  
28A Yard

TIME OF COMPLETION  
2403

CERTIFICATE NO.

LAST CARGO

LOCATION

Inspection and oil tests show the following: Shifting of vessel within shipyard permitted Yes ☒ No ☐

All cargo tanks (3) clean and gas free, safe for men and fire, AIR BLOWER IN WORK TANK.

Wing double bottom tanks 1 thru 4 gas-free clean except some grease coating, safe for men.

Forward and after takes-clean and gas free, some ~~xxxxx~~ grease coating, wipe in way of work, have air ventilation, then safe for men and fire.

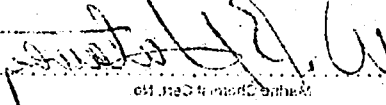
Cargo lines-open, drained.

Boatwell pump-open, drained.

Steam coils-air blown, gas free.

Work must be commenced within 24 hours of date and time of issuance, unless otherwise noted. In the event of any physical or atmospheric changes affecting the gas-free condition of the above spaces, or if in any way, immediately stop all work and contact the undersigned.

**Chemist's Indorsement**  
This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with the Standard for the Control of Gas Hazards on Vessels to Be Repaired, adopted by the National Fire Protection Association, and have found the condition of each to be in accordance with the assigned designation.  
This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and restrictions.

Signed   
W.B. Hatway, Chemist

The undersigned hereby representative acknowledges receipt of this Certificate and understands the conditions and limitations under which it was issued.

Signature Representative \_\_\_\_\_ Time \_\_\_\_\_  
Date \_\_\_\_\_

**Qualifications**  
Transfer of vessel or manipulation of valves or other equipment leading to other conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, is prohibited and endorsement in respect of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be completely "not safe," unless otherwise specifically designated.

**Standard Safety Designations**  
**SAFE FOR MEN.** Means that in the compartment or space so designated: (a) The oxygen content of the atmosphere is at least 18.0 percent by volume and that (b) Toxic materials in the atmosphere are within permissible concentration, and (c) in the judgment of the Marine Chemist, the vessel is not capable of producing toxic materials under existing atmospheric conditions which maintained as directed on the Marine Chemist's Certificate.

**SAFE FOR FIRE.** Means that in the compartment or space so designated: (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit and that (b) in the judgment of the Marine Chemist, the vessel is not capable of producing a higher concentration than permitted by 1-2.5 (a) under existing atmospheric conditions in the presence of fire and while maintained as directed on the Marine Chemist's Certificate; and further (c) All abatement spaces have been checked sufficiently to prevent the spread of fire and satisfactorily cleared, or, in the case of such tanks, have been checked as deemed necessary by the Marine Chemist.

**SAFE FOR SHIPREPAIRING.** Means that the compartment so designated: (a) Shall meet the requirements of 1-2.5 (a) and (b) in the judgment of the Marine Chemist, the vessel is capable of receiving repairs beyond the extinguishment capabilities of the assigned designations and (c) All enclosed compartments or spaces shall meet the requirements of 1-2.5 (a).

# S. B. A. SHIPYARDS, INC.

P. O. BOX 1386

JENNINGS, LOUISIANA 70546

PHONE (318) 824-1519

Tank Barge JAR-5 and/or Owners and/or Charterers  
Sun Oil Co.  
P.O. Box 2039  
Tulsa, Oklahoma 74102  
Att: Mr. Kennedy

INVOICE NO. 527

ORDER NO. Job # 170

DATE May 3, 1977 196

P. O. NO. \_\_\_\_\_

TERMS: NET 30

XXXXXXXXXX NET CASH

RED LETTER CLAUSE

We contract only upon the following terms, applicable to every contract: in the case of a vessel we have a lien upon the vessel for our bill; all time contracts are subject, without responsibility on our part, to delay in case of strike, labor difficulties, fire or causes beyond our control; or liability in case of defective workmanship or material is limited strictly to the proper replacement thereof. In respect of loss and/or damage to the vessel, we will not be responsible unless reported in writing within sixty days of delivery. This is in lieu of all other warranty.

Furthermore, we undertake to perform work on vessels and provide berth, warpage, towage and other services and facilities only upon condition that we shall not be liable in respect to any one vessel, directly or indirectly in contract, tort or otherwise, to its owners, charterers or underwriters for any injury to such vessel, its cargo, equipment or movable stores, or for any consequences thereof, unless such injury is caused by our negligence or the negligence of our employees and in no event shall our aggregate liability to all such parties in interest for damage sustained by them, as a result of such injury, exceed the sum of \$300,000.00.

"In connection with the accident and/or indemnity and/or insurance clauses, if any, contained in your specifications relating to liability for personal injuries, please note that we do not agree to same, insofar as they undertake to impose any liability or any obligations to take out or maintain insurance beyond the liabilities or the obligations to insure imposed upon us by law."

To invoice your account as follows:

1. Furnish chemicals, equipment and labor to clean vessel for change of Cargo as directed, Barge inspected by rep. of Sun from Sun Oil Station 4/30/77.

Labor & materials.	\$1,619.22
4% State & Parish Taxes	64.78
	<u>\$1,684.00</u>

Service Tug Audry F, pick up Barge at mile 302 on Canal, shift to yard, gas free dock, return on Sunday 5/1/77,	500.00
Invoice Amt.	<u>\$2,184.00</u>

Checked By

Russ L. White

5-16-77  
ck



No 170

SBA SHIPYARDS, INC.

WHITE-OFFICE  
BLUE-JOB  
GREEN-SMAIHALL  
YELLOW-WAREHOUSE

# Work Order

Rebecca

W.O. # 170  
HULL No.

PREPARED BY: Louis Small DATE 4-27-77

NAME OF VESSEL OR EQUIPMENT: Tank Barge JAR. 5 and/or

owners - Sun Oil Co. Box 2039 -

OWNER: Tulsa, Oklahoma CUST. ORDER NO.

DATE STARTED 4-28-77 DATE COMPLETED

DATE BILLED INVOICE NO.

## WORK TO BE DONE:

1. Wash out and clean main cargo tanks, dip lines & Pumpwell  
Dry out tanks - For  
Change of Cargo -
2. Turning out dry F -  
2 tanks

## SPECIAL MATERIAL TO BE ORDERED:

## SUB-CONTRACTS-OUTSIDE WORK:

SBA SHIPYARDS, INC.

# Work Order

WHITE-OFFICE  
BLUE-JOB  
GREEN-SMAIHALL  
YELLOW-WAREHOUSE

Phone  
1-918-586-6554

Rebecca

W.O. # 170  
HULL No.

ORDERED BY:

Lois Smail

DATE

4-27-77

NAME OF VESSEL OR EQUIPMENT:

TANK BARGE JAR 5 and 10

OWNER:

Tulsa OKlahoma

CUST. ORDER NO.

DATE STARTED

4-28-77

DATE COMPLETED

DATE BILLED

INVOICE NO.

WORK TO BE DONE:

1. Wash out and clean main cargo tanks, d.p. lines & pump well. Dry and touch for change of cargo.

2. Turn out and dry for 2 days.

SPECIAL MATERIAL TO BE ORDERED:



MARINE CHEMISTS, INC. OF TEXAS  
P. O. BOX 311 BEAUMONT, TEXAS 77704  
(409) 832-6409, 866-4822, 866-4223  
W. B. HAWKAWAY 537 K. L. MERCER 577

MARINE CHEMIST CERTIFICATE  
SERIAL NO. D 104244

Survey Requested by <i>SBA S.V.</i>	Vessel Owner or Agent <i>SUN OIL CO</i>	Date <i>12-19-88</i>
Vessel <i>LOU IV</i>	Type of Vessel <i>TANK BARGE</i>	Specific Location of Vessel <i>SBA/JENNINGS</i>
Last Three (3) Cargoes <i>ASPHALT</i>	Test Method <i>O<sub>2</sub>/LEL/VISUAL</i>	Time Survey Completed <i>10:00 AM</i>

*BOW RAKE — SAFE FOR WORKERS - SAFE FOR HOTWORK*

*STEAM RAKE — SAFE FOR WORKERS - SAFE FOR HOTWORK*  
*AGAINST BOTTOM WITH WATER BOTTOM.*

*CARGO TANKS*  
*No. 1-2-3-4 P/S — 0% LEL - NOT SAFE FOR HOTWORK*

*CARGO TANKS*  
*No. 5 P/S — SAFE FOR WORKERS - SAFE FOR HOTWORK*  
*IN AREAS WHERE ASPHALT HAS BEEN REMOVED*  
*FIREWATCH WITH CHARGED FIREHOSE REQD ON STAND-BY.*  
*FORCED AIR VENTILATION REQD. (MIN. 1000 CFM)*

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

**QUALIFICATIONS:** Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

**STANDARD SAFETY DESIGNATIONS** (partial list, paraphrased from NFPA 306 Subsections 1-6.1 through 1-6.4, and Subsection 5-3.2).

**SAFE FOR WORKERS:** Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**NOT SAFE FOR WORKERS:** Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

**SAFE FOR HOT WORK:** Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

**NOT SAFE FOR HOT WORK:** Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

**SAFE FOR REPAIR YARD ENTRY:** Means that the compartments and spaces of the flammable cryogenic liquid carrier so designated: (a) have been tested by sampling at remote sampling stations, and results indicate the atmosphere tested to be above 19.5 percent oxygen, and less than 10 percent of the lower flammable limit, or (b) are inerted.

**CHEMIST'S ENDORSEMENT.** This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-3 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed <i>[Signature]</i> Name	Company <i>SBA</i>	Date <i>12/19/88</i>	Signed <i>[Signature]</i> Marine Chemist	Certificate No. <i>577</i>
-----------------------------------	-----------------------	-------------------------	---	-------------------------------

20M-4-86

NOTE: THIS CERTIFICATE IS VALID ONLY ON MARINE VESSELS

Printed in U.S.A.

CUSTOMER COPY



SBA S.V. 12-30-88  
Survey Requested by Vessel Owner or Agent Date  
LOU IV TANK BARGE SBA / JENNINGS  
Vessel Type of Vessel Specific Location of Vessel  
ASPHALT OIL / LAR / WIND 10:15 AM  
Last Three (3) Cargoes Test Method Time Survey Completed

CARGO TANKS  
No. 1P/5, 45 - SAFE FOR WORKERS  
SAFE FOR HOTWORK FOR  
BOTTOM PLATE WELDING.  
FIRE WATCH AND CHARGED FIRE HOSE  
REQD. ON STAND BY.

FORCED AIR VENTILATION REQD. (MIN 1000 CFM)

AFI. RAKE - SAFE FOR WORKERS  
SAFE FOR HOTWORK

STEAM COWS TO #1P, 15, 45, BLOWN  
SAFE FOR HOTWORK.

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

**QUALIFICATIONS:** Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

**STANDARD SAFETY DESIGNATIONS** (partial list, paraphrased from NFPA 306 Subsections 1-6.1 through 1-6.4, and Subsection 5-3.2).

**SAFE FOR WORKERS:** Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**NOT SAFE FOR WORKERS:** Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

**SAFE FOR HOT WORK:** Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

**NOT SAFE FOR HOT WORK:** Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

**SAFE FOR REPAIR YARD ENTRY:** Means that the compartments and spaces of the flammable cryogenic liquid carrier so designated: (a) have been tested by sampling at remote sampling stations, and results indicate the atmosphere tested to be above 19.5 percent oxygen, and less than 10 percent of the lower flammable limit, or (b) are inerted.

**CHEMIST'S ENDORSEMENT.** This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-3 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed Ron Marshall SBA 12-30-88 Signed W. B. Hatway 577  
Name Company Date Marine Chemist Certificate No.



Survey Requested by SBA S.V. Vessel Owner or Agent SUN OIL Date 1-4-89  
Vessel LOLL IV Type of Vessel TANK BARGE Specific Location of Vessel SBA / JENNINGS LA.  
Last Three (3) Cargoes ASPHALT, CRUDE Test Method O<sub>2</sub> / H<sub>2</sub> / VISUAL / BENZENE Time Survey Completed 11:30 AM

CARGO TANK'S  
No. 1 P/S, 4'S, 5 P/S  
STERN RAKE  
ENTER WITH RESTRICTIONS  
SAFE FOR INSPECTION  
FORCED AIR VENTILATION REQUIRED  
(MIN. 1000 CFM)  
BENZENE - LESS THAN 1 PPM

In the event of any physical or atmospheric changes adversely affecting the STANDARD SAFETY DESIGNATIONS assigned to any of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

**QUALIFICATIONS:** Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

**STANDARD SAFETY DESIGNATIONS** (partial list, paraphrased from NFPA 306 Subsections 1-6.1 through 1-6.4, and Subsection 5-3.2).

**SAFE FOR WORKERS:** Means that in the compartment or space so designated: (a) the oxygen content of the atmosphere is at least 19.5 percent by volume; and that, (b) toxic materials in the atmosphere are within permissible concentrations; and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate.

**NOT SAFE FOR WORKERS:** Means that in the compartment or space so designated, the requirements of Safe for Workers have not been met.

**SAFE FOR HOT WORK:** Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces containing or having contained flammable or combustible materials have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

**NOT SAFE FOR HOT WORK:** Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met.

**SAFE FOR REPAIR YARD ENTRY:** Means that the compartments and spaces of the flammable cryogenic liquid carrier so designated: (a) have been tested by sampling at remote sampling stations, and results indicate the atmosphere tested to be above 19.5 percent oxygen, and less than 10 percent of the lower flammable limit, or (b) are inerted.

**CHEMIST'S ENDORSEMENT.** This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-3 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed Russ Marshall SBA 1-4-89 Signed James P. Pearson 577  
Name Company Date Marine Chemist Certificate No.